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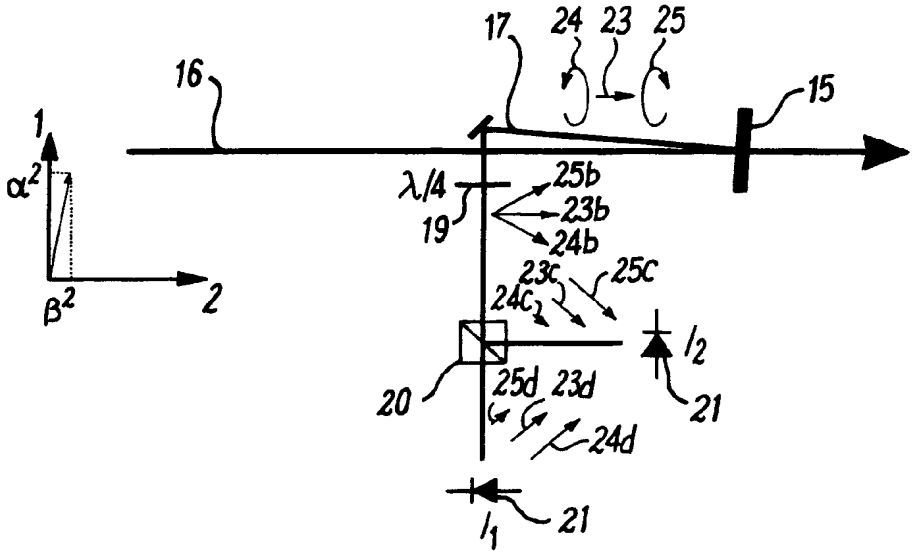
(54) Title: IMPROVED MODE SELECTION AND FREQUENCY TUNING OF A LASER CAVITY



(57) Abstract: A technique for stabilising and scanning a cw-laser cavity (3) is demonstrated. The technique involves the incorporation of an intracvity birefringent etalon (15). Such an etalon provides a means for deriving a polarised electric field component (17) from an intracavity electric field (16) of the laser cavity, the orientation of polarisation of the polarised electric field component being dependent on the frequency and polarisation of the intracavity electric field (16). Appropriate analysis of this polarised electric field component (17) enables the laser cavity to be stabilised and frequency tuned while ensuring single mode operation.

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